

AMENDMENTS TO THE SPECIFICATION

Please replace the Paragraphs on page 3, lines 11-24 with the following paragraphs rewritten in amendment format:

FIG. 1 is a planar view of the preferred embodiment of the invention;

~~FIG. 2 is a cross sectional view along 2-2 of FIG. 1;~~

~~FIG. 3 is a cross sectional view along 3-3 of FIG. 1;~~

FIG. ~~[[4]]~~ 2 is ~~an enlarged view of Circle 5 in FIG. 2~~ a cross sectional view along 2-2 of Fig. 1;

FIG. ~~[[5]]~~ 3 is ~~an enlarged view of Circle 4 in FIG. 3~~ a cross sectional view along 3-3 of Fig. 1;

FIG. ~~[[6]]~~ 4 is a cross sectional view of the elastomeric static gasket according to the preferred embodiment of the invention in between two opposite surfaces showing the elastomeric seal on the top surface of the carrier being uncompressed and the elastomeric seal on the opposite surface of the carrier being in a compressed condition;

FIG. ~~[[7]]~~ 5 is a cross-sectional view of the method of making the preferred embodiment of the gasket according to the invention; and

FIG. ~~[[8]]~~ 6 is a cross-sectional view of an alternative embodiment of the gasket of the present invention.

Please replace the Paragraph beginning on page 3, line 28 with the following paragraph rewritten in amendment format:

Figures 1-~~[[6]]~~4 show an elastomeric static gasket according to the present invention, designated by the numeral 100. The invention is drawn to both the apparatus

and the process for making the gasket 100. The gasket 100 seals fluid. The fluid may be a gas or liquid, a mixture of both, or solid particles entrained in a fluid such as dust in air or dirt in air. A liquid may be water, oil, fuel, anti-freeze, air conditioning fluid or any other similar material. The gas may be water vapor, hydrogen, air, oxygen, nitrogen, carbon dioxide, air conditioning vapor, fuel vapor, lubricating vapor or any other similar material.

Please replace the Paragraph beginning on page 4, line 30 with the following paragraph rewritten in amendment format:

As best shown in FIGS. ~~4, 5, and 6~~ 2, 3, and 4, the carrier 10 has a top surface 12 and an opposite surface 18. Preferably, a first pair of stopper members 20 are formed or molded of a polymeric material onto the top surface 12. The pair of stopper members 20 consists of two spaced[[.]] apart relatively flat compression limiters or stops 22, 24, respectively. In between the stops 22, 24, respectively is a first void or first cavity 36. The cavity 36 that is formed between the two stops 22, 24 is a volumetric space (a width, a height and a length), as is well known in the art.

Please replace the Paragraph beginning on page 5, line 7 with the following paragraph rewritten in amendment format:

In between the stops 22, 24, respectively, a first rubber elastomeric seal 60 is molded, formed, attached, disposed, applied or inserted into the cavity 36 preferably in the form of a void-volume seal [[78]]. A void-volume seal is one which is formed with the cavity or void 36 being greater than the maximum volume of the seal 60 when compressed into the cavity 36. This permits the elastomeric seal 60 to expand due to

swelling or temperature expansion or chemical interactions without extruding out of the cavity 36. The bead 62 is preferably in the shape of a triangle with its base contiguous to the top surface 12 of the carrier 10. Optionally, the shape of the seal 60 is a semicircle on a flat planar surface which is contiguous to the top surface 12 of the carrier 10. Further optionally, any other bead configuration in the elastomer seal that produces an adequate sealing force, such as rectangular, square, polygonal, semi-elliptical, semi-oval, semi-round, truncated triangular or any other shape may be used as long as it prevents the migration of fluid across the seal, would be suitable for the application in practicing the invention. In the uncompressed state, the seal 60 has at least one bead 62 with an apex 64 which is higher than the height 27, 29, respectively, of the stops 22, 24, respectively, above the surface 12. In the compressed state, that is when the seal 60 is clamped against a mating surface to seal it by a clamp load imposed on the mating surfaces, the bead 62 is compressed into the cavity 36. Because the seal is made of an elastomer or rubber which is incompressible, the rubber will conform to the volume in the space in the cavity 36 when a clamp load is applied to the gasket 100. If the volume of the cavity 36 is smaller than the seal volume, the elastomer will extrude out of the cavity. Thus, the space in cavity 36 is designed to be 100.1 % to 130% of the volume of the seal. Preferably, the volume in space in the cavity is between 105% to 110% of the volume of the seal. The compression on the bead 62 may be compressed up to 80% from the apex 64 to the surface of the carrier and preferably from 1.5% to 75%.

Please replace the Paragraph beginning on page 7, line 25 with the following paragraph rewritten in amendment format:

The height 27, 29 of the first and second members 22, 24, respectively, is preferably substantially the same. However, if the compressive load on the first member 22 is higher than on the second member 24, it may be desirable to make the compressed height of the first stopper member 22 different than the compressed height of the second stopper member 24. This difference in compressed height of the first stopper member 22 and the compressed height of the second stopper member 24 does not affect the inventive concept so long as the volume in the cavity 36 is not less than 100.1% of the maximum volume of the seal.

Please replace the Paragraph beginning on page 8, line 3 with the following paragraph rewritten in amendment format:

The gasket 100 heretofore has been described in the context of the construction of the seal 60 and a first pair of stopper members 20 on the top surface 12 of the carrier 10. Similarly, the bottom surface 18 of the carrier 10 preferably has a mirror-like construction similar to that described for the top surface 12. Thus, a second seal 80 and a second pair of stopper members 40 are formed or molded onto the opposite surface 18. The stopper members 40 include stops 42, 44, respectively, which are spaced apart to form a second cavity or void 56. Preferably, the stops 42, 44, respectively, have sides 43, 45, respectively, which are substantially perpendicular to the carrier 10, and heights 47, 49 respectively, which extend above the bottom surface 18. Alternatively, the sides are sloping (~~not shown~~ as shown in Figs. 3 and 4) or slightly tapered. The second

elastomeric seal 80 has at least one bead 82 which has an apex 84 to form a void-volume seal 98. Thus, the bottom portion of the gasket 100 has a mirror-like construction as to the top portion and the seal 80 and stops 42, 44, respectively, function in a similar manner to that described for the seal 60, stops 22, 24, respectively, and top surface 12 of the carrier 10.

Please replace the Paragraph beginning on page 8, line 19 with the following paragraph rewritten in amendment format:

As stated earlier, the preferred construction of the gasket is a mirror image construction (that is the configuration on the one side of the carrier is identical to the opposite side) so that when the gasket 100 is compressed or clamped between mating surfaces such as one surface 2 and an opposite surface 4, the reactive forces are similar on each side of the carrier 10. This balances the forces on the carrier 10 and permits the use of "thin" carriers. The top half portion of Figure [[6]] 4 shows the stopper members 20 in an uncompressed state while stopper members 40 in the lower half of Figure [[6]] 4 are in a compressed state. Additionally, this construction minimizes the formation of bending stresses in mating brittle materials which can cause cracks or breaking of such brittle materials. The overall compressed thickness of the gasket 100 is preferably in the range of 0.015mm to 1.75mm.

Please replace the Paragraph beginning on page 9, line 23 with the following paragraph rewritten in amendment format:

In making the elastomeric static gasket 100, the carrier 10 is clamped between one mold half 6 and the other mold half 8 of a conventional molding machine as shown in Figure [[7]] 5. If a conventional elastomer is used, then an adhesive coat is applied to the surface of the carrier prior to molding prior to receiving the elastomer. If a self-bonding elastomer is used, it may not be necessary to use a separate adhesive coating on the surface of the carrier. The uncured polymer or elastomer material is dispensed into the cavity through a hole in the mold so that the elastomer flows into the space between the carrier 10 and into the cavity halves 6, 8, respectively, so as not to deform the carrier. The polymeric or elastomeric material is heated in order to enhance flow into the cavity. The polymeric material is at a sufficient temperature so as to cure the polymer to form elastomeric sealing members 60, 80, respectively and the first stopper member 20 and second stopper member 40. Alternatively, a polymer material may be deposited, injected, transferred, formed in place, applied by roll coating or screen printed onto the top surfaces 12 and bottom surface 18 of the carrier 10 to form the elastomeric sealing members 60, 80, respectively. Those skilled in the art will recognize that there may be certain applications where only one elastomeric sealing member need be formed on the carrier 10 and thus an elastomeric sealing member 60 is formed on only the top surface 12 of the carrier. In this configuration of the gasket 100, a pressure sensitive adhesive may optionally be applied to the opposite side 18 of the carrier 10 to aid in assembly of the gasket to one mating surface and bond to it so as to seal against the one mating surface. Alternatively, the first and second stopper members are formed of other polymers or a layer of metal, ceramic or composite fiber board, as described earlier.

Please replace the Paragraph beginning on page 10, line 17 with the following paragraph rewritten in amendment format:

An alternate embodiment of the present invention is shown in FIG. [[8]] 6 and the gasket is designated by the numeral 200. Where the elements are the same as in gasket 100, the numerals remain the same.